05-GF-113
(5990)

Water & Light
THE POWER OF COMMUNITY

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SERVICE

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January 17, 2003

Mr. Scot Cullen, Chief Electric Engineer
Public Service Commission
610 N. Whitney Way
P.O. Box 7854
Madison, WI 53707-7854

RE: In the Matter of Filing Reporting Requirements for Appropriate Inspection and Maintenance, PSC Rule 113.0607(6)

Dear Mr. Cullen:

Enclosed for filing are 3 copies of the Two Rivers Water & Light's report to the commission, submitted every two years, showing compliance with its Preventative Maintenance Plan.

Very truly yours,

Thomas Bushman
Electric Distribution Superintendent

Enclosures

Water&Light
THE POWER OF COMMUNITY

TWO YEAR REPORT DOCUMENTING COMPLIANCE WITH THE PREVENTATIVE MAINTENANCE PLAN

Two Rivers Water & Light

FILING DEADLINE
FEBRUARY 1, 2003

January 17, 2003

Thomas Bushman
1415 Lake St.
Two Rivers, WI 54241
920-793-5553
tombus@two-rivers.org

This report format was prepared by the MEUW work group for PSC Rule 113.0607 for use by the 82 municipal electric utilities in Wisconsin and endorsed by PSC staff as meeting the requirements of Rule PSC 113.0607.

I Reporting Requirements: PSC 113.0607(6) states;

Each utility shall provide a periodic report to the commission showing compliance with its Preventative Maintenance Plan. The report shall include a list of inspected circuits and facilities, the condition of facilities according to established rating criteria, schedules established and success at meeting the established schedules.

II Inspection Schedule and Methods:

SCHEDULE:	MONTHLY	ANNUAL	EVERY 5 YEARS
Transmission (□69Kv)		X	X
Substations	X	X	
Distribution (OH & UG)			X

METHODS: Five criteria groups will be used to complete the inspection of all facilities.

1. IR – infrared thermography used to find poor electrical connections and/or oil flow problems in equipment.
2. RFI - Radio Frequency Interference, a byproduct of loose hardware and connections, is checked using an AM radio receiver.
3. SI – structural integrity of all supporting hardware including poles, crossarms, insulators, structures, bases, foundations, buildings, etc.
4. Clearance – refers to proper spacing of conductors from other objects, trees and conductors.
5. EC – equipment condition on non-structural components such as circuit breakers, transformers, regulators, reclosers, relays, batteries, capacitors, etc.

Distribution facilities will be inspected by substation circuits on a 5-year cycle such that the entire system will be inspected every 5 years. Inspector instructions for inspecting all facilities and forms are included in the plan.

III Condition Rating Criteria

This criterion, as listed below, establishes the condition of a facility and also determines the repair schedule to correct deficiencies .

0) Good condition
1) Good condition but aging
2) Non-critical maintenance required – normally repair within 12 months
3) Priority maintenance required – normally repair within 90 days

4) Urgent maintenance required – report immediately to the utility and repair normally within 1 week

IV Corrective Action Schedule

The rating criteria as listed above determine the corrective action schedule.

V Record Keeping

All inspection forms and records will be retained for a minimum of 10 years. The inspection form contains all of the required critical information i.e. inspection dates, condition rating, schedule for repair and date of repair completion.

VI Reporting Requirements

A report and summary of this plan's progress will be submitted every two years with the first report due to the Commission by February 1, 2003. The report will consist of a cover letter documenting the percent of inspections achieved compared to the schedule and the percent of maintenance achieved within the scheduled time allowance.

VII Inspected Circuits and Facilities

Circuit # and description	Substation
Northend Residential	**Columbus**
Industrial Feeder	**Columbus**

We have no base load or peaking generation, less than 50 megawatts per unit in size.

VIII Scheduling Goals Established and Success of Meeting the Criteria:

"It was this utility's goal to complete all monthly substation inspections, annual transmission line inspections and to inspect 40% of the distribution system. In addition, we expected to complete all scheduled maintenance resulting from the inspections within the prescribed time periods specified in the rating criteria.

All of the inspection goals were met. 40% of the distribution system was inspected. No urgent maintenance items were found. Of the 77 non-critical and priority maintenance items found, most were ground moldings that had been damaged and were repaired at the inspection time. There were a few transformers that did not have a separate redundant ground wire for the tank ground, the method we currently use, and they were rewired within the allotted time period. The remaining items were tree clearance related items and are located on a section of the system that is being trimmed this Winter and will be corrected at that time.

IX Facility condition – rating criteria:

"During the past two years, approximately 40% of the distribution system was inspected and all substation inspections were completed on time. Of the items found requiring maintenance, all were repaired before they were responsible for an outage to customers. We have had only 2 storm related outages affecting approximately 30 customers. Equipment failures only accounted for 2 outages due to failed underground cable affecting approximately 200 residential customers. This cable was already scheduled to be replaced in 2003 due to age. Most of the 15Kv system is less than 35 years old and is in excellent condition." The 4Kv system is aging but in good shape. We are currently in the process of converting our 4Kv system to 15Kv. There is only a small portion left in the center core of the City.